



**UNITED STATES DEPARTMENT OF COMMERCE
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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/560,024	02/20/96	CHEN	LUD-5354.1-J

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NEW YORK NY 10022

HM11/0224

EXAMINER	
CAPOTA, A	
ART UNIT	PAPER NUMBER
1645	5

DATE MAILED: 02/24/98

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents

Advisory ActionApplication No.
08/560,024Applicant(s)
Chen et al.Examiner
Anthony C. CaputaGroup Art Unit
1645

THE PERIOD FOR RESPONSE: [check only a) or b)]

- a) ☒ expires 5 months from the mailing date of the final rejection.
- b) ☐ expires either three months from the mailing date of the final rejection, or on the mailing date of this Advisory Action, whichever is later. In no event, however, will the statutory period for the response expire later than six months from the date of the final rejection.

Any extension of time must be obtained by filing a petition under 37 CFR 1.136(a), the proposed response and the appropriate fee. The date on which the response, the petition, and the fee have been filed is the date of the response and also the date for the purposes of determining the period of extension and the corresponding amount of the fee. Any extension fee pursuant to 37 CFR 1.17 will be calculated from the date of the originally set shortened statutory period for response or as set forth in b) above.

- ☐ Appellant's Brief is due two months from the date of the Notice of Appeal filed on _____ (or within any period for response set forth above, whichever is later). See 37 CFR 1.191(d) and 37 CFR 1.192(a).

Applicant's response to the final rejection, filed on 2 Feb 1998 has been considered with the following effect, but is NOT deemed to place the application in condition for allowance:

- ☒ The proposed amendment(s):
- ☐ will be entered upon filing of a Notice of Appeal and an Appeal Brief.
 - ☒ will not be entered because:
 - ☒ they raise new issues that would require further consideration and/or search. (See note below).
 - ☐ they raise the issue of new matter. (See note below).
 - ☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal.
 - ☐ they present additional claims without cancelling a corresponding number of finally rejected claims.

NOTE: see attachment

- ☐ Applicant's response has overcome the following rejection(s):

- ☐ Newly proposed or amended claims _____ would be allowable if submitted in a separate, timely filed amendment cancelling the non-allowable claims.

- ☒ The affidavit, exhibit or request for reconsideration has been considered but does NOT place the application in condition for allowance because:
see attachment

- ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

- ☒ For purposes of Appeal, the status of the claims is as follows (see attached written explanation, if any):

Claims allowed: 11, 12, 15, and 16

Claims objected to: 17

Claims rejected: 8-10, 13, and 14

- ☐ The proposed drawing correction filed on _____ ☐ has ☐ has not been approved by the Examiner.
- ☐ Note the attached Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Other

ANTHONY C. CAPUTA
PRIMARY EXAMINER
ART UNIT 1645

Art Unit: 1645

ADVISORY ACTION

1. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1645.

2. The amendment filed 2/2/98 under 37 CFR 1.116 in reply to the final rejection has been considered but is not deemed to place the application in condition for allowance and will not be entered because:

A. There is no convincing showing under 37 CFR 1.116(b) why the proposed amendment is necessary and was not earlier presented.

B. The proposed amendment raises new issues that would require further consideration and/or search.

1. Newly amended claim 8 raises a new issue under 35 USC 112, second paragraph since it is not clear what constitutes as a "tuor rejection antigen".
2. Newly amended claim 8 raises a new issue under 35 USC 112, second paragraph for use of the phrase "amino acids 4-12 of SEQ ID NO: 4 defining the amino acid sequence of a tuor rejection antigen". As the claim is drafted it is unclear how a amino acid sequence defines the "tuor rejection antigen" which has a molecular weight of 46 kDa or 34.3 kDa and contains more than 100 amino acids.
3. Newly amended claim 8 raises an issue of lack of antecedent basis for the phrase " a tuor rejection antigen".
4. Newly amended claim 8 raises a new search issue. The claims as proposed would require a search of amino acids 4-12 of SEQ ID NO: 4. Applicants assert that no new search issues are raised by this amendment. Applicants argument is not persuasive since the claims pending do not require a search of amino acids 4-12 of SEQ ID NO: 4.

Art Unit: 1645

- C. The proposed amendment is not deemed to place the application in better form for appeal by materially simplifying the issues for appeal.

3. The prior objection to the specification under 35 U.S.C. § 112, first paragraph for failing to provide an enabling disclosure is maintained for the reasons as set forth of record.

Applicants argue the rejection should be withdrawn since the references cited by the Examiner (e.g. Lazar et al., and Burgess et al.) are drawn to a non-analogous area (i.e. growth factors) and not a tumor rejection antigen precursor. Applicants arguments are not persuasive to obviate the rejection. The Examiner acknowledges the that the prior art cited is drawn to 2 proteins which are growth factors. However, since:

- 1.) both the claimed invention and art cited are drawn to proteins; and
- 2.) the art cited (e.g. Lazar et al., and Burgess et al.) teaches modifications of two proteins with different structure and function dramatically affect the biological activity of these proteins

it is reasonable for a skilled artisan to conclude the biological activity of a protein, such as the MAGE-1 will be dramatically affected contrary to applicants arguments.

Applicants argue the rejection should be withdrawn in view of the decision of *Ex parte Anderson* 30 USPQ 2d 1866, 1868 (Bd. Pat. App. Int. 1994), it was determined that as a normal rule, single amino acid changes in amino acid sequence do not affect the activity of a protein.

Applicants arguments are not persuasive. From the decision of *Ex parte Anderson* it is clear that a single variation in the amino acid structure of the protein will change the activity and functions of the protein, when said variation is in a critical region of the protein (see page 1868, Column 1 of the decision of *Ex parte Anderson* as cited by Applicants). Since the specification provides insufficient guidance of what regions of protein are associated with the activity and functions of the protein, and lack of predictability associated with regard to producing and using

Art Unit: 1645

the myriad or derivatives encompassed in the scope of the claims one skilled in the art one would be forced into undue experimentation in order to practice broadly the claimed invention, contrary to applicants arguments.

Applicants argue the claimed invention is enabled since a tumor rejection antigen precursor is processed to a TRA which is presented on a cell surface in combination with a MHC molecule. This argument is not sufficient to obviate the rejection since: the limitation that the tumor rejection antigen precursor is processed to a TRA is not recited in the rejected claim(s). Beyond this applicants arguments are not persuasive to obviate the rejection because: 1) the specification provide essentially no guidance as to which of the essentially infinite possible choices is likely to be successful and; 2) the art cited (e.g. Lazar et al., and Burgess et al.) teaches modifications affect biological activity.

As set forth previously the Examiner suggest applicants incorporate the limitation of claim 17 into claim 8 to obviate the rejection.

4. Claims 8-10, 13, and 14 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

5. Claim 20 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As set forth previously while the specification has support for claiming an peptide consisting of SEQ ID NOS 2, 3, or 4 (see allowed claim 12) the specification as originally filed provides no support for claiming a MAGE-1 tumor rejection comprising all of these sequences (claim 20).

Art Unit: 1645

Applicants argue the rejection should be withdrawn in view that the examples clearly show that the recited oligopeptides came from a MAGE-1 molecule. Accordingly, as argued by applicants the specification clearly and unequivocally supports dependent claim 20. Applicants arguments are not sufficient to obviate the rejection. As set forth previously, while it is true the specification provides support of three oligopeptides prepared from the predicted amino acid sequence of MAGE-1 this statement does not provide support for broadly claiming a MAGE-1 comprising all of these sequences as recited. The specification as originally filed does not provide an adequate written description of a MAGE-1, wherein the location of the recited sequences are found at any position within the MAGE-1. For the reasons set forth above and in the prior Office Action said rejection is maintained.

However, in view of applicants response and upon further consideration by the Examiner, the objection of the specification for not providing an adequate written description for claiming a MAGE-1 precursor limited to a sequence of 40 amino acids is withdrawn.

6. Claims 11, 12, 15, and 16 are allowed.

7. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Anthony C. Caputa, Ph.D.

February 23, 1998



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GROUP 1800